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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,296	10/21/2003	Takuro Sekiya	2271/71291	8028

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EXAMINER

LIANG, LEONARD S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/690,296

Applicant(s)

SEKIYA, TAKURO

Examiner

Leonard S. Liang

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11, 22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11 and 22-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Yokoi (US Pat 5764245).

Yokoi discloses:

- {claim 23} An ink-jet recording apparatus (figure 1); a printing unit comprising an ink-jet recording head which jets recording liquid onto a recording medium (figure 1, reference 1); a memory for storing a page of image data that is used for printing image on a back side of the recording medium, a front side of the recording medium having already been printed (column 3, lines 3-18); a conveyance unit and a conveyance path for conveying the recording medium, the front side of the recording medium having been already printed, into the printing unit again in order to print an image onto the back side of the recording medium (figures 1 and 7-14; abstract); wherein the ink-jet recording apparatus sends the image data for the back side to the ink-jet recording head in the reverse order so that the image data is printed on the back side of the recording medium from bottom to top direction (abstract; column 3, lines 30-48; orientations defined as "bottom" and "top" are subjective depending on perspective); the vertical

orientations of the images printed on the front and back sides, respectively, of the recording medium coincide with each other (column 3, lines 30-48).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoi (US Pat 5764245) in view of Minata et al (US Pat 5143904).

Yokoi discloses:

- {claim 11} An ink-jet recording apparatus (figure 1); a containing member which contains a recording medium (figure 1, reference 5); a printing unit comprising an ink-jet recording head which jets recording liquid onto the recording medium (figure 1, reference 1); a conveyance unit and a conveyance path for conveying the recording medium, one side of which has already been printed, into the printing unit again in order to print an image onto the other side thereof (figures 1 and 7-14; abstract); the ink-jet recording apparatus enables the printing unit to print images on the recording medium such that the vertical orientations of the images printed on both sides of the recording medium coincide with each other

Art Unit: 2853

(column 3, lines 30-48); wherein the ink-jet recording apparatus has a memory for storing a page of image data that is used for printing image on the back side of the recording medium, front side of which has been already printed (abstract; column 3, lines 1-18); the ink-jet recording apparatus sends the image data to the ink-jet recording head in the reverse order so that the image data is printed on the back side of the recording medium from bottom to top direction (abstract; column 3, lines 30-48; orientations defined as "bottom" and "top" are subjective depending on perspective)

- {claim 22} wherein top and bottom of the image on the front side of the recording medium coincide with top and bottom of the recording medium, and top and bottom of the image on the back side of the recording medium coincide with the top and bottom of the image on the front side of the recording medium (column 3, lines 30-43)

Yokoi differs from the claimed invention in that it does not disclose:

- {claim 11} a recording medium which has a base member and granular material coated on both sides of the base member, and roughness of the surfaces of the recording medium coated granular material is smaller than the roughness of the base member

Minata et al discloses:

- {claim 11} a recording medium which has a base member and granular material coated on both sides of the base member, and roughness of the surfaces of the recording medium coated granular material is smaller than the roughness of the

base member (column 7, lines 47-59; column 8, lines 3-9; column 13, lines 53-62; column 14, lines 8-9)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Minata et al into the invention of Yokoi. The motivation for the skilled artisan in doing so is to gain the benefit of improved image quality with images of higher resolution.

Response to Arguments

Applicant's arguments filed 09/29/06 have been fully considered but they are not persuasive.

The applicant argues, "Yokoi, as understood by Applicant, proposes a recording apparatus which utilizes a line buffer to receive and temporarily store data from a host computer for a scanning line of the image to be printed... Thus, Yokoi specifically teaches that utilizing the recording apparatus proposed therein avoids the use of a large capacity buffer memory. Since Yokoi teaches away from an ink-jet recording apparatus which has a memory for storing a page of image data that is used for printing image on the back side of the recording medium, Yokoi, alone or in combination with other references, simply would not have rendered the subject matter of claim 11 obvious.

The examiner agrees with the applicant that Yokoi appears to teach against the use of a large capacity buffer memory, which can hold data of one page volume in one chunk. However, the applicant has not amended the claims to include a large capacity buffer memory, which can hold data of one page volume in one chunk. The applicant has only amended the claims to

Art Unit: 2853

disclose "a memory for storing a page of image data." This language is fairly broad. Even the currently disclosed line buffer memory is capable of this because even though it does not hold a page of image data in one chunk like a large capacity buffer memory, the data it holds can be expandable to H stages and M columns (column 3, lines 5-6), thus effectively storing a page of image data, one line at a time. The examiner suggests that the applicant narrow the amended claim language.

However, the examiner will also note that even though the main invention of Yokoi directly teaches against using a large capacity buffer memory, Yokoi also discloses that using a large capacity buffer memory is well known in the art of duplex printing. Therefore, even if the applicant overcomes Yokoi, the addition of a large capacity buffer memory may not be sufficient to constitute allowable subject matter.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2853

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S. Liang whose telephone number is (571) 272-2148.


The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

12/09/06

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12/11/06
MANISH S. SHAH
PRIMARY EXAMINER